Sustainable Farming, Sustainable Food:
Remarks prepared for the Global Produce Sustainability Conference
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[remarks as prepared]

Good morning. Thank you for inviting me to speak to your conference. It's exciting to be with so many leaders across the supply chain in such an important industry, all gathered to share knowledge and experience around issues in sustainability.

Today I want to tell you about USDA's new vision for science and sustainability, and how our efforts in sustainability both model and reflect your efforts in the produce industry.

Your conference topic is a timely one. Conversations focusing on sustainability have become more widespread, and also more sophisticated, in food and agriculture supply chains and across society.

This Administration understands and values sustainability – it's now part of our vision and embedded in our goals. Secretary Vilsack has made a commitment to using agricultural science to:

- Create wealth in rural communities – for which sustainable and competitive agriculture is a key strategy
- Conserve and restore public and private lands
- Address international food security through sustainable agricultural production and biotechnology exports
- Ensure a safe and nutritious food supply – particularly for America's children

The position of USDA's science enterprise within this larger departmental context gives us the opportunity for our science investments to leverage the "action" branches of the department that touch people "every day in every way" as Secretary Vilsack says, through programs in nutrition, conservation, food safety, marketing and regulatory programs, as well as farm and commodity programs. It also allows us to weave sustainable agriculture and sustainable production systems into the very fabric of USDA.

Of particular importance to the produce industry, for example, is the 70% of USDA's budget allocated to nutrition assistance. Obviously the produce industry has an important role to play in supplying the fruits and vegetables that we emphasize as a critical part of a healthful diet, which

is central to our nutrition work here at USDA and a key component of the First Lady's "Let's Move" initiative.

The central role of sustainability in this Administration was evident in the theme of this year's Agricultural Outlook Forum, the USDA's chief policy conference. Its theme was "Sustainable Agriculture: The Key to Health and Prosperity." At the conference, Secretary Vilsack reaffirmed USDA's commitment to science when he noted that research is the first part of the Department's new strategy for rural America aimed at improving the prospects of farmers and ranchers and those living in rural communities. Many speeches and sessions at the conference addressed sustainability in the context of food security, biofuels, organic agriculture, and much more.

Sustainability is about the long term, so it's useful to think about the changes in agriculture in recent history. Over time, we have experienced shifts in the way we think about agriculture.

From the late 1800s to the mid-1900s we moved to a more scientific, productive agriculture, incorporating technologies such as improved varieties, fertilizers, pesticides and equipment.

In the mid-1900s we continued to move to more industrialized production, processing and saw the rise of a globalized commodity economy, the appearance of supermarkets, and mass media marketing.

In the 1960s and 1970s, concerns surfaced about the consequences of agriculture and other human endeavors on the environment. We began to recognize the complexity and inter-connectedness of ecosystems, and the finiteness of planetary resources, and the need to consider present choices in relation to future generations. We began to view the world as involving trade-offs between productivity and other social and environmental goals. Organic farming began to appear as one approach to these concerns.

Today, we are faced with even greater challenges. U.S. consumers have come to expect – and by and large we have been able to supply – abundant, safe and inexpensive food. Yet paradoxically we experience both rising obesity and areas of "food deserts" here in America. Worldwide, an estimated 40,000 people die each day from hunger and related causes, and with a projected global population of 8 billion to 11 billion people by 2050 the World Bank estimates that 70-90 percent of increases in global food production will need to come from improvements in existing agriculture rather than greater acreage under cultivation. These statistics raise real concerns about the environmental and human impacts of our current production levels and methods.

Clearly we need to raise more food on less land with fewer impacts. But reducing impacts per unit of production may not be enough, if the cumulative impacts of higher production are more than our environment and our communities can support.

We are faced with a pressing need to make the biggest paradigm shift of all, to tackle the question "How can we maximize productivity while living within our means?" Implicit in the way we phrase this question is the evolving definition of sustainable agriculture.

At USDA, we have a long-standing definition of agricultural sustainability that Congress gave us in 1990, which is in the Title 7, secion 3103, of the U.S. Code. It says that sustainable agriculture means an integrated system of plant and animal production practices having a site-specific application that will over the long-term do five things:

- Satisfy human food and fiber needs
- Enhance environmental quality and the natural resource base upon which the agriculture economy depends
- Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls
- Sustain the economic viability of farm operations, and
- Enhance the quality of life for farmers and society as a whole.

This definition is 20 years old, and while still relevant, it is not enough. It is not enough for our current challenge, in at least two ways.

First, it is too easy to interpret as if we work toward any of those goals, we are advancing sustainability – which we are, but in too piecemeal a manner. It is too easy to miss the importance of the little word "and" that links the five goals together, which is so important to the needed paradigm shift that agriculture, as with any economic activity, must lie completely within the bounds set by societal norms and goals, which in turn must lie completely within the bounds set by our environment and natural resources. The idea of maximizing productivity (economic activity) while living within our means (the social and environmental bounds). Some people have referred to this view of sustainability as "strong sustainability" by contrast with the "weak sustainability" of making trade-offs between partially overlapping goals.

Our 20-year old definition is also dated in a second important way. It speaks mainly to production systems, rather than to the full supply chain. In today's view of sustainable agriculture, we are looking at the whole food system – the consequences across the entire supply chain, from inputs to agriculture, to production, to processing and distribution, to consumption and waste disposal. This approach calls for metrics that can assess environmental, social and economic impacts across many different sectors and in many different geographic locations. Policymakers and consumers expect these data to be widely available and transparent.

So essentially what is evolving amounts to a very complex accounting problem. How do we identify and collect the information we need, and put it together in such a way that we can make

informed decisions about policies, about the tradeoffs among the many choices about sustainability we face?

At USDA, we have data on many of the relevant processes and impacts for this accounting, but we have only begun to think about how to put them together in a meaningful way to inform policy and decision making.

Fortunately we have some cross-cutting USDA sustainability initiatives that have potential to pull the pieces together into a more integrated framework that can help achieve the sustainability goals that we are discussing today and that are crucial to the needed paradigm shift.

We have several mechanisms – both long-standing and new – to coordinate USDA activities around sustainability.

USDA has a long-standing Council that coordinates sustainable development across the Department, coordinated by Carol Kramer-LeBlanc in the Office of the Chief Economist. The Sustainable Development Council advances sustainable agriculture, forestry, and rural development across USDA.

We also have a Sustainable Operations Council – a part of the federal government-wide effort to "walk to talk" when it comes to stewardship and sustainability, developed by executive order under the last administration, and expanded and re-focussed by President Obama's more recent Executive order.

We have a new Office of the Chief Scientist, in response to the last Farm Bill which gave a new title and USDA-wide responsibility of Chief Scientist to the REE Under Secretary. That office has a focus on each of our science priorities (food security, nutrition, food safety, climate change and biofuels) plus a cross-cutting focus on sustainability.

We have some exciting new initiatives, as well.

The relatively new "Know Your Farmer, Know Your Food" initiative, led by Deputy Secretary Merrigan, aims to strengthen the critical connection between farmers and consumers and support local and regional food systems. It is an important strategy for economic opportunities for farmers and food system entrepreneurs in rural America.

Of course local and regional food systems are one end of the marketing spectrum form local to global, and we support the whole range, including a major effort on expanding exports. We expect that the "national conversation" of Know Your Farmer, Know Your Food will benefit all of agriculture by demonstrating the connection between food, agriculture, community and the environment.

I'm very excited to tell you about a new initiative to improve access to data and information on sustainability that is led by our National Agricultural Library, under its new director, Simon Liu.

The initiative will start to address the challenge of bringing together a very diverse collection of information sources related to sustainability, in order to eventually support those informed decisions about policy and tradeoffs.

Last month we convened a small workshop of experts from universities, government and the private sector, to discuss the opportunities and challenges in collecting and providing access to data and information on sustainable agriculture. The conclusions of the workshop were that sustainability data are extraordinarily heterogeneous, involving data from multiple disciplines (agriculture, environment, energy, economics, social sciences, etc.) collected by diverse methodologies (both quantitative and qualitative) at various levels, from local to global. We lack a common vocabulary and framework for collecting, assessing, and sharing the resulting knowledge.

Fortunately we have within USDA a precious resource that is ideally suited to solve this problem. The National Agricultural Library is the world's largest agricultural library, with over 50 million physical items in its collection. It has the modern informatics capabilities, the vocabulary (thesaurus), and the partnerships and collaborations necessary to a comprehensive framework. Its new director, Dr. Simon Liu, has invaluable experience organizing a similar framework for genome information during his time at the National Library of Medicine.

With NAL's framework and the other cross-cutting initiatives of the Department, I am optimistic that we at USDA will be able to provide better leadership to the new paradigm of outcome-oriented, data-driven progress toward highly productive and sustainable supply chains.

We can succeed in this work in large part because there is a growing consensus across society around some key points in the sustainability conversation:

- Almost everyone recognizes and supports improvements in agriculture that mitigate environmental damage and improve food quality and safety.
- Almost everyone supports the use of science and social science-based metrics in the determination of which choices lead to best outcomes.
- Almost everyone recognizes that the human relationship to food is profound and complex.

Despite this widespread agreement, there are certainly many areas of an active conversation over the areas where we have yet developed consensus. Some of these questions include:

- What imperatives do we accept to ensure all our kind is properly fed now and in the future?
- Are defined and undefined environmental and social risks in the future more or less important than food security in the present?

- What processes should we use to prioritize known and predictable risks and benefits?
- What are the most appropriate methodologies to use to evaluate practices?
- What are the best ways to communicate these complex concepts and data with markets?

I look forward to being a strong partner with you in these discussions and in our joint efforts to apply research, education, extension, and all of the action capacity of USDA to ensure sustainability for food and agriculture and society. As many have observed, sustainability is a journey rather than a fixed end point, and we look forward to continuing the conversation and the journey.

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